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Chen

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(54) **HANGABLE STORING BOX FOR A STACK OF PLASTIC BAGS**

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(52) **U.S. Cl.** **221/45**; 206/554
(58) **Field of Search** 221/26, 33, 34, 221/45, 46, 48, 55; 206/554, 494, 233

(56) **References Cited**

U.S. PATENT DOCUMENTS

1,953,887 A * 4/1934 Medoff 206/37
5,695,065 A * 12/1997 Kennedy et al. 206/494

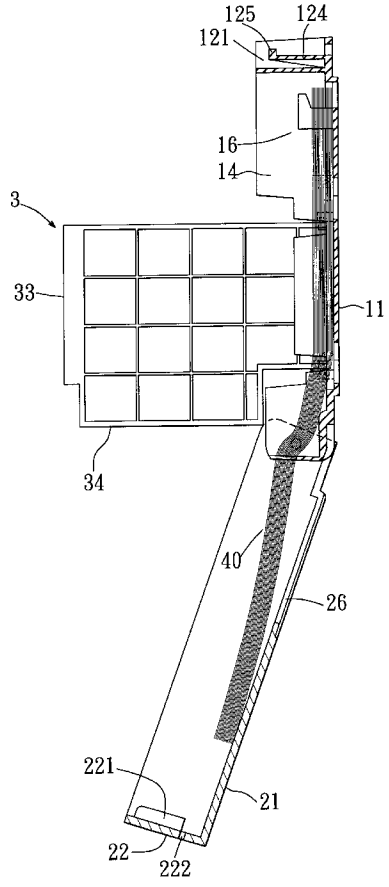
* cited by examiner

Primary Examiner—Kenneth W. Noland
(74) *Attorney, Agent, or Firm*—Ladas & Parry

(57) **ABSTRACT**

A hangable storing box includes first and second housing halves defining an inner space therebetween, and a limiting plate disposed between the first and second housing halves and separating the inner space into front and rear spaces. A hook member projects from a rear wall of the first housing half for holding a stack of seamed plastic bags. The limiting plate has a bottom end spaced apart from bottom walls of the first and second housing halves to define thereamong a gap so as to permit the plastic bags to extend downwardly from the hook member through the rear space and the gap and then turn around the bottom end of the limiting plate to extend upwardly into the front space.

2 Claims, 5 Drawing Sheets



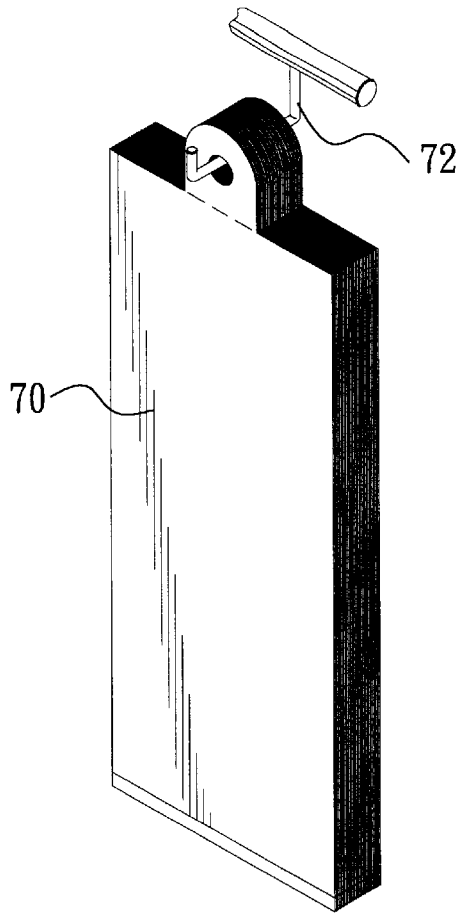


FIG. 1
PRIOR ART

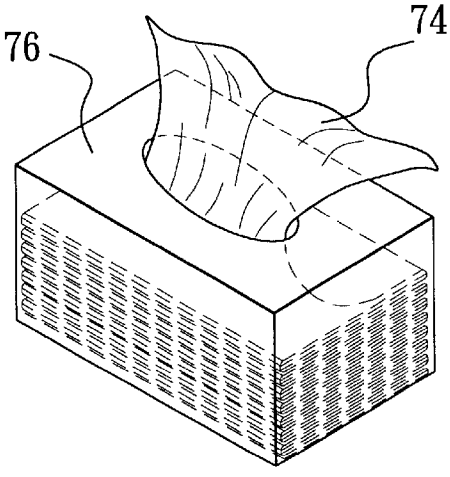


FIG. 2
PRIOR ART

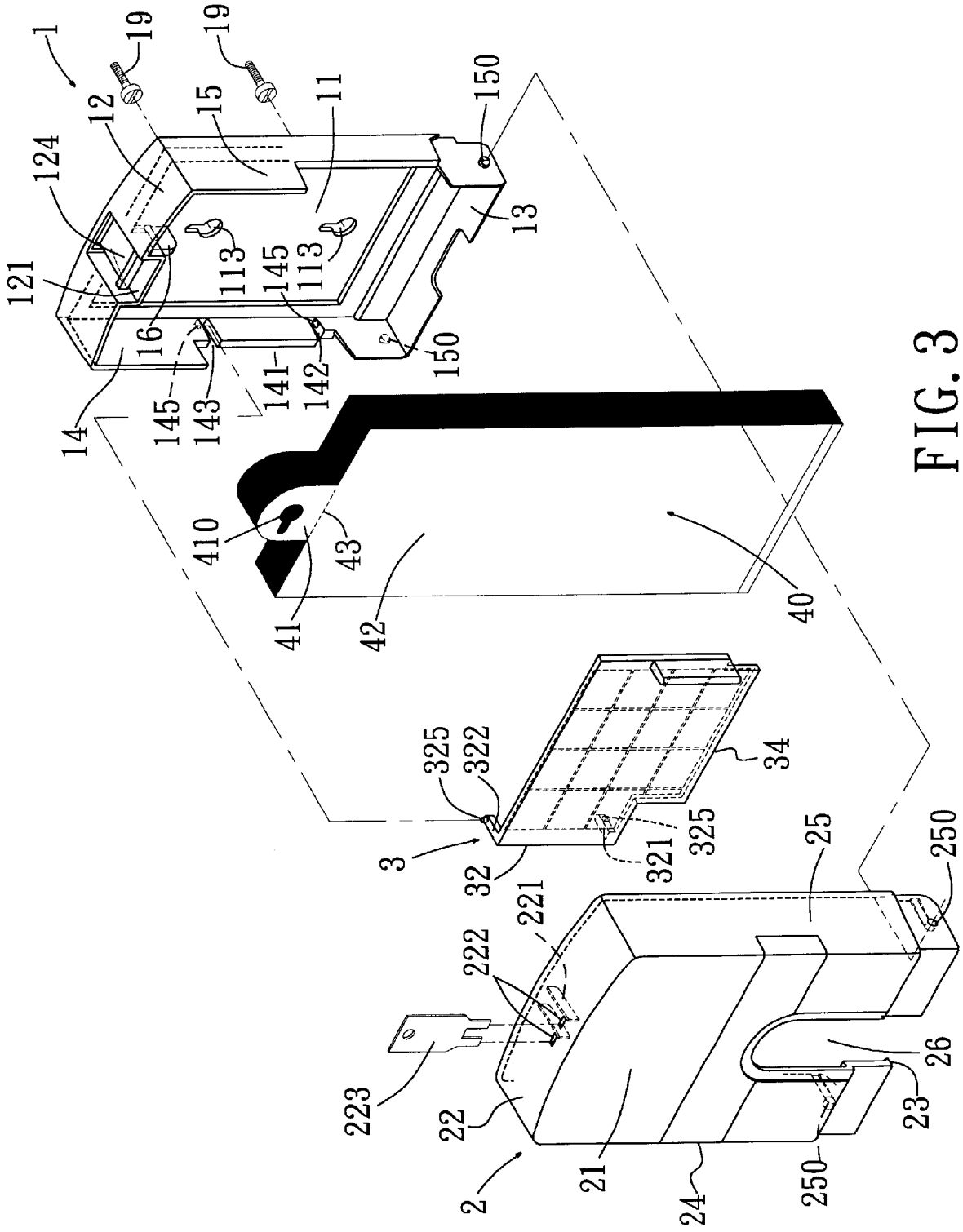

1
19
19
12
15
11
150
124
13
121
113
145
113
16
150
141
142
145
143
14
410
43
41
42
40
325
322
34
3
32
321
325
25
250
221
222
223
22
21
24
250
23
26
2

FIG. 3

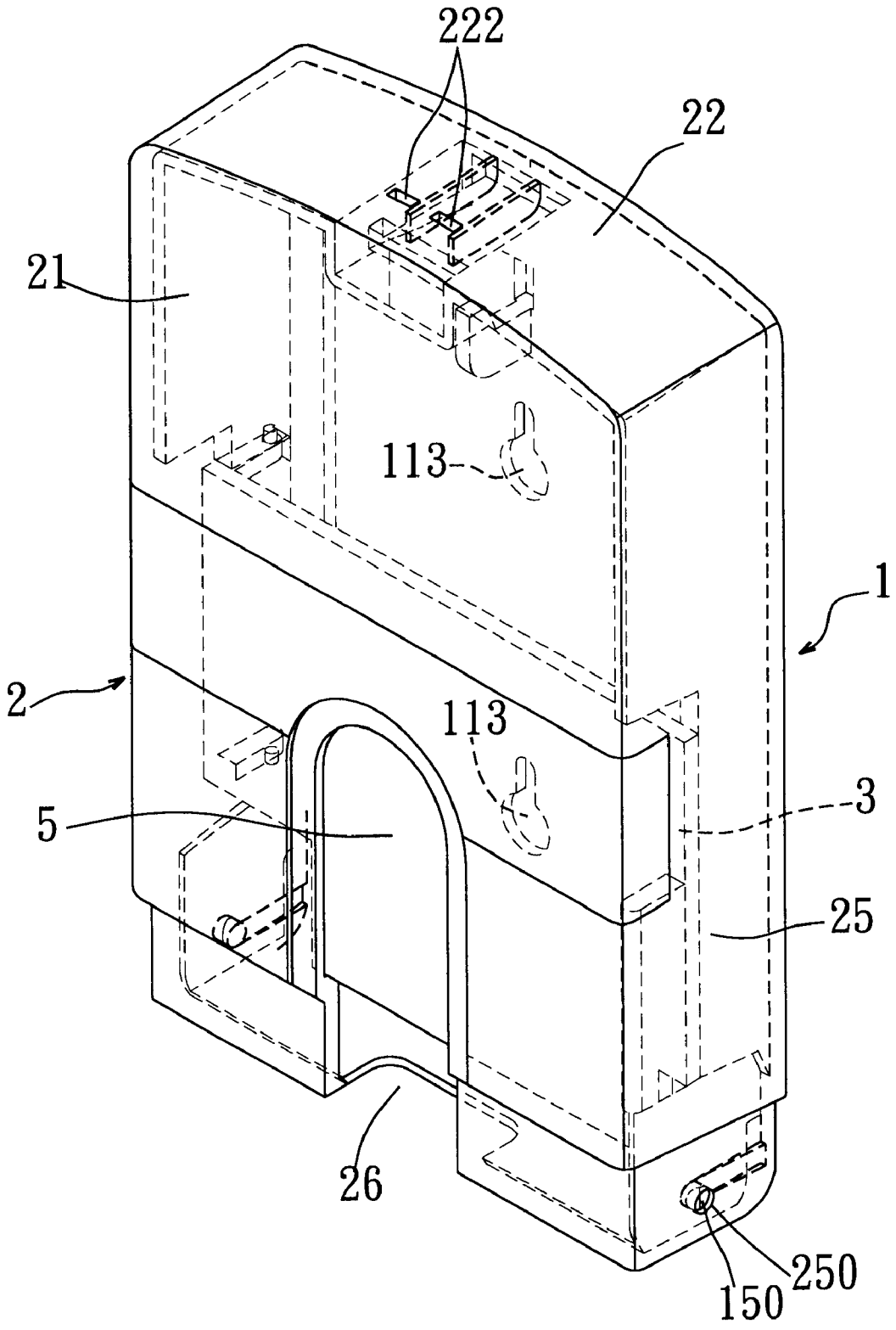


FIG. 4

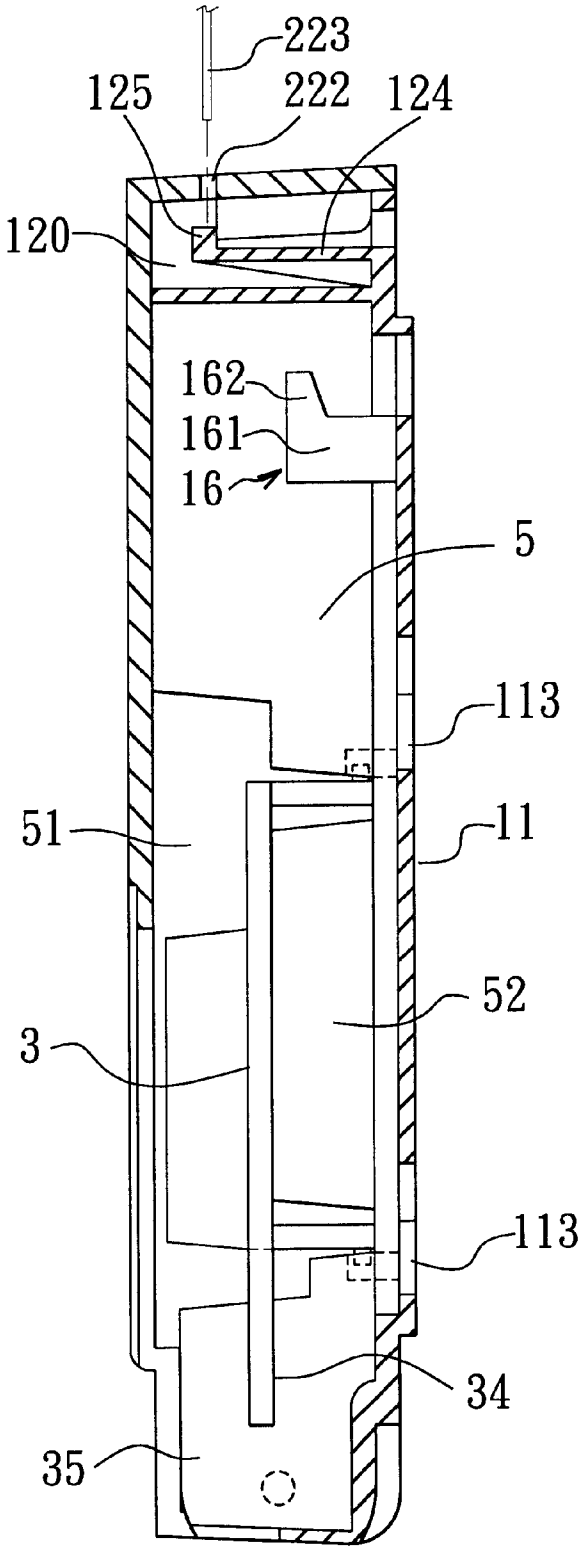


FIG. 5

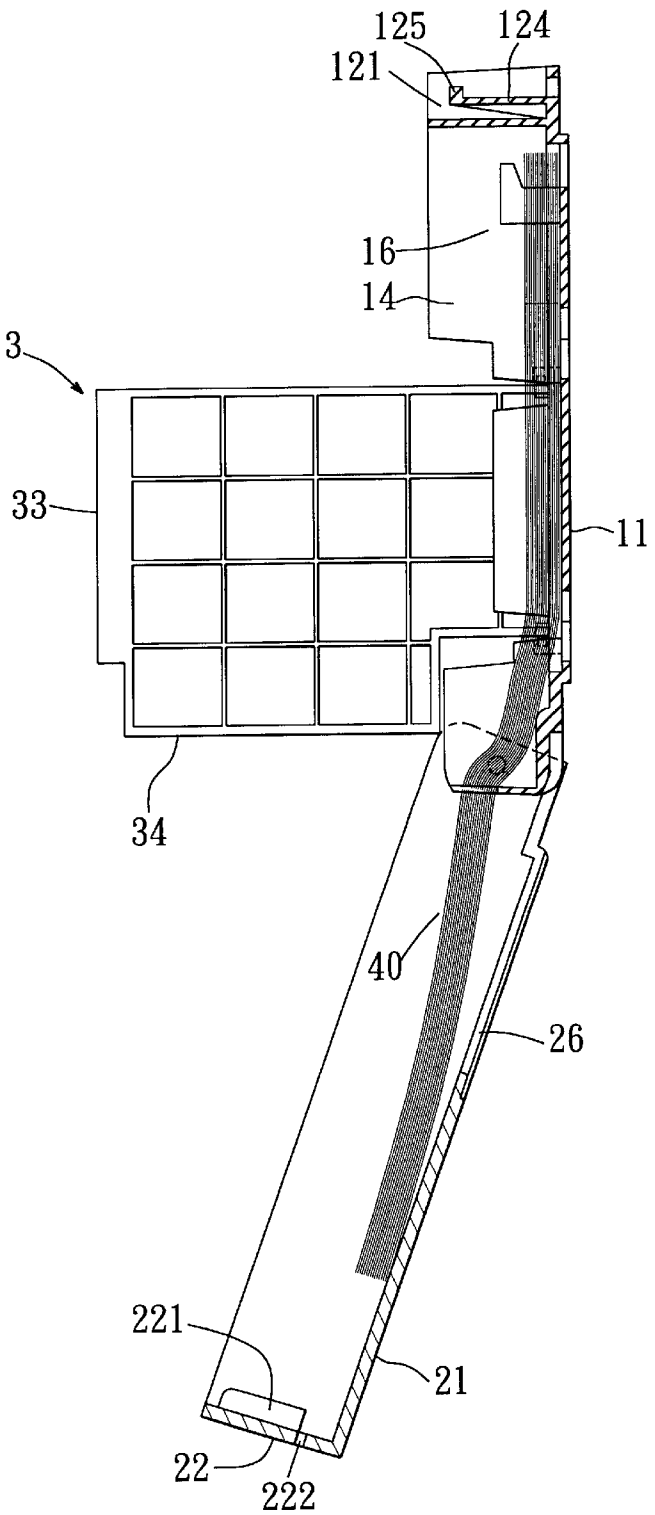

125
124
121
16
14
3
33
11
34
40
26
221
21
22
222

FIG. 6

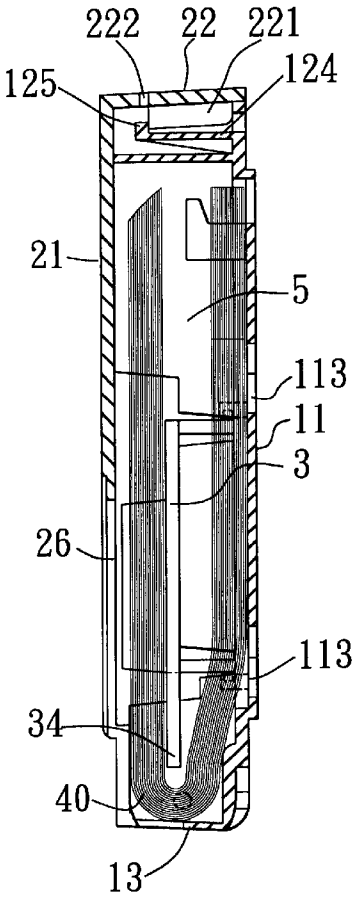

222
22
221
125
124
21
5
113
11
3
26
113
34
40
13

FIG. 7

HANGABLE STORING BOX FOR A STACK OF PLASTIC BAGS

BACKGROUND OF THE INVENTION

1. Field of the Invention

This invention relates to a hangable storing box for a stack of seamed plastic bags.

2. Description of the Related Art

FIG. **1** illustrates a conventional manner of hanging a stack of seamed plastic bags **70** on a hook member **72** that is normally mounted on a wall (not shown). Each of the seamed plastic bags **70** can be torn along a seamed line so as to be separated apart from the stack of the seamed plastic bags **70**. However, such hanging manner is disadvantageous in that the stack of the seamed plastic bags **70** tend to be undesirably torn from the hook member **72** or several of the seamed plastic bags **70** tend to be simultaneously torn and separate from the stack of the seamed plastic bags **70** when only one of the seamed plastic bags **70** is intended to be used. Moreover, the assembly of the hook member **72** and the plastic bags **70** has an untidy appearance.

FIG. **2** illustrates a conventional storing box **76** for storing a stack of folded plastic bags **74**. However, the storing box **76** requires folding of each plastic bag **74**. Moreover, there is a tendency that several of the folded plastic bags **74** can be simultaneously pulled out from the storing box **76** when only one of the plastic bags **74** is intended to be used.

SUMMARY OF THE INVENTION

Therefore, the object of the present invention is to provide a hangable storing box that is capable of overcoming the aforementioned drawbacks.

According to the present invention, a hangable storing box for storing a stack of seamed plastic bags comprises: rectangular first and second housing halves which are pivoted to each other and which define an inner space therebetween, the first housing half having top and bottom walls, a rear wall, two opposite side walls, and a hook member projecting from the rear wall toward the second housing half for holding the stack of the plastic bags, the second housing half having top and bottom walls associated with the top and bottom walls of the first housing half, a front wall opposite to the rear wall, two opposite side walls associated with the side walls of the first housing half, and a front opening formed in the front wall for access to the inner space and the stack of the plastic bags; and a limiting plate disposed between the first and second housing halves, pivoted to one of the side walls of the first and second housing halves, separating the inner space into front and rear spaces, and having a bottom end spaced apart from the bottom walls of the first and second housing halves to define thereamong a gap so as to permit the plastic bags to extend downwardly from the hook member through the rear space and the gap and then turn around the bottom end of the limiting plate to extend upwardly into the front space.

BRIEF DESCRIPTION OF THE DRAWINGS

In drawings which illustrate an embodiment of the invention,

FIG. **1** illustrates a conventional hanging manner of hanging a stack of seamed plastic bags;

FIG. **2** illustrates a conventional storing box for storing a stack of folded plastic bags;

FIG. **3** is an exploded perspective view illustrating a hangable storing box embodying this invention for storing a stacked of seamed plastic bags;

FIG. **4** is a perspective view of the storing box of FIG. **3**;

FIG. **5** is a cross-sectional view of the storing box of FIG. **3**;

FIG. **6** is another cross-sectional view to illustrate the stack of the plastic bags, which is disposed in the storing box of FIG. **3** in an unfolded state; and

FIG. **7** is another cross-sectional view to illustrate the stack of the plastic bags, which is disposed in the storing box of FIG. **3** in a folded state.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

FIGS. **3** to **7** illustrate a preferred embodiment of a hangable storing box of this invention for storing a stack of seamed plastic bags **40**.

Each of the seamed plastic bags **40** has a hanging portion **41** with a hole **410**, a storing portion **42**, and a seam portion **43** connected to the hanging and storing portions **41**, **42**.

The storing box includes: rectangular first and second housing halves **1**, **2** which are pivoted to each other and which define an inner space **5** therebetween, the first housing half **1** having top and bottom walls **12**, **13**, a rear wall **11**, two opposite side walls **14**, **15**, a pair of retaining holes **113** formed in the rear wall **11** to permit the storing box to be hung on a wall (not shown) via supporting members **19**, and a hook member **16** projecting from the rear wall **11** toward the second housing half **2** and extending through the holes **410** in the plastic bags **40** for holding the stack of the plastic bags **40**, the second housing half **2** having top and bottom walls **22**, **23** associated with the top and bottom walls **12**, **13** of the first housing half **1**, a front wall **21** opposite to the rear wall **11**, two opposite side walls **24**, **25** associated with the side walls **14**, **15** of the first housing half **1**, and a front opening **26** formed in the front wall **14** for access to the inner space **5** and the stack of the plastic bags **40**; and a limiting plate **3** disposed between the first and second housing halves **1**, **2**, pivoted to one of the side walls **14** of the first and second housing halves **1**, **2**, separating the inner space **5** into front and rear spaces **51**, **52**, and having a bottom end **34** spaced apart from the bottom walls **13**, **23** of the first and second housing halves **1**, **2** to define thereamong a gap **35** SO as to permit the plastic bags **40** to extend downwardly from the hook member **16** through the rear space **52** and the gap **35** and then turn around the bottom end **34** of the limiting plate **3** to extend upwardly into the front space **51**.

A notch **141** is formed in one of the side walls **14**. A pair of spaced apart upper and lower slits **143**, **142** are formed in the one of the side walls **14**, and extend inwardly from an edge of the notch **141**. A pair of spaced apart upper and lower pivot protrusions **322**, **321** project from one end **32** of the limiting plate **3** in a direction perpendicular to the limiting plate **3** and into the upper and lower slits **143**, **142**.

First tongue-and-groove means **150**, **250** are provided on the side walls **14**, **15**, **24**, **25** of the first and second housing halves **1**, **2** adjacent to the bottom walls **13**, **23** of the first and second housing halves **1**, **2** so as to permit the second housing half **2** to be turnable about a horizontal axis that is perpendicular to the side walls **14**, **15**, **24**, **25** of the first and second housing halves **1**, **2**.

Second tongue-and-groove means **145**, **325** are provided on one of the side walls **14** of the first housing half **1** within the upper and lower slits **143**, **142** and the upper and lower

pivot protrusions **322**, **321** so as to permit the limiting plate **3** to be turnable about a vertical axis that is parallel to the side walls **14**, **15**, **24**, **25** of the first and second housing halves **1**, **2**.

The top wall **12** of the first housing half **1** is formed with a top recess **121** extending inwardly relative to the inner space **5**. A locking unit includes a spring arm **124** that projects horizontally from the rear wall **11** into the top recess **121** and that has a free anchored end **125**, and a pair of locking protrusions **221** that project downwardly from the top wall **22** of the second housing half **2** into the top recess **121** to engage releasably the anchored end **125** of the spring arm **124** so as to lock the second housing half **2** to the first housing half **1**. A pair of inserting holes **222** are formed adjacent to the locking protrusions **221**. A key member **223** is insertable into the inserting holes **222** so as to abut against and press the spring arm **124** downwardly in order to disengage the locking protrusions **221** from the anchored end **125** of the spring arm **124** and to permit the second housing half **2** to be turnable about the horizontal axis.

Due to the presence of the limiting plate **3**, the stack of the plastic bags **40** is able to be folded around the former, thereby significantly reducing the size of the storing box. Moreover, the aforementioned drawbacks associated with the prior art can be eliminated.

With the invention thus explained, it is apparent that various modifications and variations can be made without departing from the spirit of the present invention. It is therefore intended that the invention be limited only as recited in the appended claims.

I claim:

1. A hangable storing box for storing a stacked of seamed plastic bags, comprising:

rectangular first and second housing halves which are pivoted to each other and which define an inner space therebetween, said first housing half having top and bottom walls, a rear wall, two opposite side walls, and a hook member projecting from said rear wall toward said second housing half for holding the stack of the plastic bags, said second housing half having top and bottom walls associated with said top and bottom walls of said first housing half, a front wall opposite to said rear wall, two opposite side walls associated with said side walls of said first housing half, and a front opening formed in said front wall for access to said inner space and the stack of the plastic bags;

a limiting plate disposed between said first and second housing halves, pivoted to one of said side walls of said first and second housing halves, separating said inner space into front and rear spaces, and having a bottom end spaced apart from said bottom walls of said first and second housing halves to define thereamong a gap so as to permit the plastic bags to extend downwardly from said hook member through said rear space and said gap and then turn around said bottom end of said limiting plate to extend upwardly into said front space;

first tongue-and-groove means provided on said side walls of said first and second housing halves adjacent to said bottom walls of said first and second housing halves so as to permit said second housing half to be turnable about a horizontal axis that is perpendicular to said side walls of said first and second housing halves; and

second tongue-and-groove means provided on one of said side walls of said first housing half and one end of said limiting plate so as to permit said limiting plate to be turnable about a vertical axis that is parallel to said side walls of said first and second housing halves.

2. The hangable storing box of claim **1**, wherein said top wall of said first housing half is formed with a top recess extending inwardly relative to said inner space, said hangable storing box further comprising a locking unit that includes a spring arm projecting horizontally from said rear wall into said top recess and having a free anchored end, and at least a protrusion projecting downwardly from said top wall of said second housing half into said top recess to engage releasably said anchored end of said spring arm so as to lock said second housing half to said first housing half.

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